**Before the**
**Federal Communications Commission**
**Washington, D.C. 20554**

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| In the Matter of | ) | |
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| Wireless Telecommunications Bureau and | ) | GN Docket Nos. 14-177, 15-319, 17-183 |
| Office of Engineering and Technology Seek | ) | and 17-258 |
| Comment Pursuant to the Spectrum Pipeline | ) | |
| Act of 2015 | ) | |

## REPLY COMMENTS OF THE UTILITIES TECHNOLOGY COUNCIL

The Utilities Technology Council (UTC) hereby files the following reply comments in response to the Commission's Public Notice in the above-referenced proceeding.[1] UTC opposes comments on the record that seek to downplay the complexity of expanding the use of the 6 GHz band (i.e. 5925-7125 MHz) and the associated risks of interference to the safety, security and reliability of electric, gas and water services, as well as numerous other services that depend on the 6 GHz band for mission-critical communications.

As UTC and other interested parties have commented in various proceedings, including the Commission's *Notice of Inquiry*,[2] the 6 GHz band is heavily used to provide long-haul high capacity links and it is uniquely suited to meet the needs of utilities and critical infrastructure industries who require highly reliable, cost-effective communications.[3] Any interference to these

[1] *See Wireless Telecommunications Bureau and Office of Engineering and Technology Seek Comment Pursuant to the Spectrum Pipeline Act of 2015*, Public Notice, DA 18-841, GN Docket Nos. 14-177, 15-319, 17-183, 17-258 (rel. Aug. 10, 2018) ("Public Notice").

[2] *In the Matter of Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Inquiry, GN Docket No. 17-183 (rel. Aug. 3, 2017) ("NOI").

[3] *See e.g.* Comments of the Utilities Technology Council and the Edison Electric Institute, GN Docket No. 17-183 (filed Oct. 2, 2017); *and* Reply Comments of the of the Utilities Technology Council and the Edison Electric Institute, GN Docket 17-183 (filed Nov. 15, 2017). *See also* Comments of Southern Company Services, GN Docket No. 17-183 (filed Oct. 2, 2017). Comments of Duke Energy Corporation in GN Docket No. 17-183 (filed Oct. 2, 2017); Comments of Tucson Electric Power Company in GN Docket No. 17-183 (filed Oct. 2, 2017); Comments of Lower Colorado River Authority in GN Docket No. 17-183 (filed Oct. 2, 2017) and Reply Comments of PacifiCorp

mission-critical communications systems can have catastrophic results. Morevoer, these systems are subject to prior coordination requirements that effectively protect against harmful interference. The introduction of unlicensed operations in the 6 GHz band threatens to cause significant interference to these systems, as has been demonstrated through several studies that have been filed on the record.[4]

It is important to note that utilities lack reasonable alternatives to using the 6 GHz band and were recently relocated to that band after the 2 GHz band was reallocated for commercial services. The parties seeking to expand the use of the 6 GHz band for unlicensed operations, however, have plenty of other options for spectrum access. Most importantly, the public interest would not be served by threatening the safety and reliability of essential electric, gas and water services just because proponents of unlicensed wireless commercial services find it convenient to use the 6 GHz band. Worse, their arguments are pure supposition and lack any empirical data. They simply claim that they need additional spectrum and that access to the 6 GHz band would help; and they barely mention the threat of interference, let alone quantify it or offer meaningful

in GN Docket No. 17-183 (filed Nov. 16, 2017). *And see* Comments of the National Public Safety Telecommunications Council in GN Docket No. 17-183 (filed Oct. 2, 2017) *and* Comments of APCO International in GN Docket No. 17-183 (filed Oct. 2, 2017).

[4] *See e.g.* Letter from Cheng-yi Liu and Mitchell Lazarus, Counsel for the Fixed Wireless Communications Coalition to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket No. 17-183 (filed Mar. 13, 2018)(attaching a study that rebuts the analysis by RKF Engineering regarding frequency sharing for radio local area networks in the 6 GHz Band, and demonstrates that "The uncontrolled distribution of RLANs, in the numbers and at the power levels RKF studied, will cause widespread harmful interference to fixed microwave receivers.") *See also* Letter from Cheng-yi Liu and Mitchell Lazarus, Counsel for the Fixed Wireless Communications Coalition to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket No. 17-183 (filed June 8, 2018)(responding to two ex parte submissions by the group of companies filing as Apple et al. ("RLAN Group") and countering their claims that interference to microwave systems can be mitigated.) *And see* Letter from Cheng-yi Liu and Mitchell Lazarus, Counsel for the Fixed Wireless Communications Coalition to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket No. 17-183 (filed June 25, 2018)(responding to a letter in the docket signed by Apple et al. ("RLAN Group") dated June 12, 2018 ("RLAN Group June 12 Ex Parte") and showing flaws in their proposed interference mitigation techniques.) *See also* Letter from Cheng-yi Liu and Mitchell Lazarus, Counsel for the Fixed Wireless Communications Coalition to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket No. 17-183 (filed Aug. 28, 2018)(describing flaws in RLAN Group interference mitigation techniques for indoor RLAN operations.)

ways to mitigate against it.

History has shown a pattern that is prologue for the 6 GHz band if it is indeed opened up for unlicensed operations. In every other band that has been made available for unlicensed operations --including the 902-928 MHz band, the 2.4 GHz band, and the 5.8 GHz band – congestion and interference have followed. Now, proponents of unlicensed use of the 6 GHz band want the Commission to believe that the 6 GHz band can be shared without interference to incumbent microwave systems, while doing nothing to substantiate their claims. Worse, the stakes are higher if there is interference in the 6 GHz band. The mission-critical communications systems in the 6 GHz band help to keep the lights on, water flowing and trains from crashing. Given the magnitude of the risk of interference to these operations, the Commission should refrain from expanding access to the 6 GHz band for unlicensed operations.

UTC supports the comments by the National Public Safety Telecommunications Council (NPSTC), which urges the Commission to "be clear [in its Report to Congress under the Spectrum Pipeline Act] that incumbent usage in the 6 GHz band is significant, and that protection of incumbents is a complex issue yet to be resolved."[5] UTC agrees with NPSTC that the Commission should not rush to expand the use of the 6 GHz and "not pre-determine the real engineering that must be done to assess if/how sharing can be implemented with no interference to approximately 100,000 critical microwave links in the 6 GHz band."[6] Contrary to proponents of expanded access for unlicensed operations, the Commission should not adopt a rulemaking or commit to any timeline for adopting final rules for expanding access for unlicensed operations in

[5] *See* Comments of the National Public Safety Telecommunications Council in GN Docket No. 14-177 at 8 (filed Sept. 11, 2018).

[6] *Id.*

the 6 GHz band. [7] Moreover, the debate over the potential for interference from unlicensed operations in the 6 GHz band should not be downplayed as a "relatively narrow corner-case" issue.[8] Contrary to proponents of unlicensed use of the 6 GHz band, this remains a very controversial issue that is far from settled in any proceeding.[9] For proponents of unlicensed operations to say otherwise, evinces a complete misunderstanding and/or disregard of the magnitude of the risk of interference to mission critical communications that are carried over the microwave systems in the 6 GHz band.

**Conclusion**

UTC echoes the comments on the record that oppose unlicensed use of the 6 GHz band, and it opposes those downplay the magnitude of the risk as well as the probability of interference to the mission-critical communications microwave systems in the band. Accordingly, UTC urges the Commission to refrain from rushing ahead to adopt a rulemaking or to commit to any timeline for final rules to allow unlicensed operations in the 6 GHz band. Utilities, public safety and railroads are among the many important services that heavily use the 6 GHz band and depend on microwave systems in the band to ensure the safe, reliable and secure delivery of services to the public. Utilities and others lack reasonable alternatives to the 6 GHz band. By contrast, there are other bands that are far better suited for shared use for unlicensed operations, including the 3.7-4.2 GHz band. For all of these reasons, UTC opposes comments in this

[7] *But see* Comments of the Wi-Fi Alliance in GN Docket No. 14-177 at 5 (filed Sept. 11, 2018)(urging the FCC to report to Congress that it has *already* adopted a rulemaking and committed to a timeline for final rules for unlicensed operations in the 6 GHz band).

[8] *But see* Comments of the Dynamic Spectrum Alliance in GN Docket No. 14-177 at 4 (filed Sept. 11, 2018.)(stating that "While there has been robust debate in the record on the relatively narrow corner-case of RLAN device transmissions occurring in the main beam of a Fixed Service receiver, there is otherwise broad agreement and a general lack of controversy that marks several other current proceedings.")

[9] *Id.*

proceeding that urge the Commission to rush to open up the band as part of its report to Congress under the Spectrum Pipeline Act. UTC supports those comments that caution the Commission to recognize that the band is heavily used and that additional engineering studies are needed to demonstrate that sharing the 6 GHz band with unlicensed operations can be accomplished without interference to mission critical microwave systems in the band.

Respectfully,

**Utilities Technology Council**

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Brett Kilbourne
Vice President Policy and General Counsel
Utilities Technology Council
1129 20th Street NW, Suite 350
Washington, DC 20036
202-872-0030

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